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EXAMINER

RYMAN, DANIEL J

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 05/13/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/816,706

Applicant(s)

CHOW, PETER KA-FAI

Examiner

Daniel J. Ryman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 4/15/2004 have been fully considered but they are not persuasive. On pages 6-7 of the Response, with respect to claims 1, 3, and 5, Applicant argues that Hinchey in view of Mallory does not render the claim obvious. Specifically, Applicant argues that Hinchey only discloses stripping a field, and as such does not disclose the stripping of a non-obvious field, such as the LARQ field. Applicant goes on to argue that Mallory only discloses the LARQ protocol and does not disclose stripping of an LARQ field. In response, Examiner, respectfully, asserts that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant attacks each reference and argues that the reference does not disclose the claim language. Examiner submits that it is the combination of Hinchey and Mallory that discloses the claim language. Hinchey teaches that it is well known to strip fields from a packet. Mallory teaches that that LARQ is used to reduce the effective error rate of an unreliable frame-based communication channel or network and that LARQ frames are different than non-LARQ frames. Thus Examiner maintains that Hinchey in view of Mallory suggests stripping the fields from the LARQ packet in order to convert an Ethernet frame into an LARQ frame and vice versa.

2. On pages 8-9 of the Response, Applicant argues, with respect to claims 6-8, in addition to the previously stated arguments, that Hinchey in view of Mallory does not "teach or suggest stripping the LARQ header to re-enable sleep mode wake-up". In response, Examiner notes that

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the features upon which applicant relies (i.e., that the controller strips the LARQ header to re-enable sleep mode wake-up) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). As such, Examiner maintains that Hinchey in view of Mallory renders the claims obvious. If Applicant wishes for the aforementioned limitations to be given patentable weight then Applicant should amend the claims to include these limitations in the claims.

3. On pages 9-11 of the Response, Applicant argues, with respect to claim 2, that Hinchey does not disclose placing the stripped information in another frame. Examiner agrees which is why Examiner combines Hinchey with Callon. Again, Examiner, respectfully, asserts that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Examiner submits that Hinchey discloses placing the stripped information in the same packet of information. Callon discloses forming multiple packets out of a single packet in order to ensure that each packet is within the size limitation of a network. Thus, Examiner maintains that Hinchey in view of Mallory in further view of Callon suggests placing the information in the LARQ header in a frame which will follow the stripped frame in order to ensure that each frame is within the size limitation of the network.

4. In addition, Applicant argues that the references do not disclose that "LARQ may cause sleep mode wake-up to be disabled". Again, Examiner notes that the features upon which applicant relies (i.e., that LARQ may cause sleep mode wake-up to be disabled) are not recited in

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the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). As such, Examiner maintains that Hinchey in view of Mallory in further view of Callon renders the claims obvious. If Applicant wishes for the aforementioned limitations to be given patentable weight then Applicant should amend the claims to include these limitations in the claims.

5. On pages 11-12 of the Response, Applicant argues, with respect to claim 4, that Gibson “adds nothing regarding claims 1 and 3. Gibson only describes a wake-up data sequence in a frame. The present invention does not claim a wake-up data sequence in a frame”. Examiner, respectfully, disagrees. Claim 4 states “determining if a bit pattern at a set byte location in the stripped frame matches a wake pattern”. As such, Examiner submits that the claims do claim a wake-up data sequence in the frame. Therefore, Examiner maintains that the cited prior art renders the claims obvious.

6. In addition, Applicant again argues against references individually by stating that “Gibson does not disclose [comparing the wake-up data in a frame employing remote sleep mode wake-up] in a frame stripped of the LARQ header”. Examiner, again, submits that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). It is the combination of references that teaches comparing the wake-up data in a frame employing remote sleep mode wake-up in a frame stripped of the LARQ header, not Gibson alone. As such, Examiner maintains that the references disclose the limitations of the claims.

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7. Further, Applicant argues that the cited prior art does not disclose that sleep mode is re-enabled. Again, Examiner notes that the features upon which applicant relies (i.e., that sleep mode is re-enabled) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). As such, Examiner maintains that Hinchey in view of Mallory in further view of Gibson renders the claims obvious. If Applicant wishes for the aforementioned limitations to be given patentable weight then Applicant should amend the claims to include these limitations in the claims.

8. On pages 12-13, Applicant argues, with respect to claim 9, that there is no motivation to combine Hinchey and Mallory since “the problem addressed by the present invention is not discussed in either Hinchey or Mallory”. Examiner, respectfully, disagrees. One of ordinary skill in the art would have been motivated to combine Hinchey and Mallory for the reasons stated in the Rejection. Examiner submits that the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). As such, Examiner maintains that Hinchey in view of Mallory in further view of Gibson renders the claims obvious.

9. In addition, Applicant states the claims recite “a system with such an Ethernet controller in conjunction with a home phone line controller that has features that re-enable sleep mode wake-up in the Ethernet controller disabled by the addition of LARQ in a frame with the wake-up data sequence”. Examiner, respectfully, notes that the features upon which applicant relies (i.e., that sleep mode is re-enabled) are not recited in the rejected claim(s). Although the claims

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are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). As such, Examiner maintains that Hinchey in view of Mallory in further view of Gibson renders the claims obvious. If Applicant wishes for the aforementioned limitations to be given patentable weight then Applicant should amend the claims to include these limitations in the claims.

10. On pages 14-15, Applicant argues, with respect to claims 10-12, that the cited prior art does not render the claims obvious since the cited prior art does not disclose stripping the LARQ header to re-enable sleep mode wake-up. Again, Examiner, respectfully, notes that the features upon which applicant relies (i.e., that sleep mode is re-enabled) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). As such, Examiner maintains that Hinchey in view of Mallory in further view of Gibson renders the claims obvious. If Applicant wishes for the aforementioned limitations to be given patentable weight then Applicant should amend the claims to include these limitations in the claims.

11. For the aforementioned reasons, Examiner maintains the rejection of the claims. Examiner urges Applicant to amend the claims in order to add limitations which will distinguish the claims from the prior art. For instance, Applicant repeatedly argues that the prior art does not teach certain features where the certain features are not in the recited claims. By adding such features to the claim language, Applicant could overcome the prior art.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1, 3, and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinchey et al (USPN 5,999,541) in view of Mallory (USPN 6,335,933).

14. Regarding claims 1 and 5, Hinchey discloses a method and a line controller for modifying a packet to be compatible with a network, the method comprising the steps of and the controller comprising means for: (a) detecting a field in a frame (col. 1, line 66-col. 2, line 21); (b) stripping the field and a frame check sequence (FCS) in the frame (col. 1, line 66-col. 2, line 21; col. 5, lines 1-3; and col. 5, lines 4-28); (c) recalculating the FCS for the stripped frame (col. 1, line 66-col. 2, line 21; col. 5, lines 1-3; and col. 5, lines 4-28); and (d) adding the recalculated FCS to the stripped frame (col. 1, line 66-col. 2, line 21; col. 5, lines 1-3; and col. 5, lines 4-28). Hinchey does not disclose that the field is a limited automatic repeat request (LARQ) header. Mallory teaches, in an Ethernet network, modifying an Ethernet frame to include an LARQ header in order to reduce the effective error rate of an unreliable frame-based communication channel or network (col. 4, lines 16-38 and col. 6, lines 9-20). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to have the field be an LARQ header in order to convert an Ethernet frame into an LARQ Ethernet frame and vice versa.

15. Regarding claim 3, referring to claim 1, Hinchey in view of Mallory implicitly discloses (e) sending the stripped frame with the recalculated FCS to an Ethernet controller (Hinchey: col.

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1, line 66-col. 2, line 29, esp. col. 2, lines 22-29; col. 5, lines 1-3; and col. 5, lines 4-28) where an “Ethernet controller” is broadly defined as an Ethernet device capable of switching a packet.

16. Regarding claim 6, referring to claim 5, Hinchey in view of Mallory implicitly disclose that an asserted first signal to the first logic block indicates that the LARQ header is enabled and must be stripped from the frame. Although Hinchey in view of Mallory do not disclose the “nut and bolts” of the invention, it is implicit that a signal is needed to indicate that a packet translation is required.

17. Regarding claim 7, referring to claim 5, Hinchey in view of Mallory implicitly discloses that the first logic block asserts a second signal and a third signal to the second logic block, wherein the second signal indicates that the FCS is to be stripped from the frame, wherein the third signal indicates that the LARQ header is to be stripped from the frame. Although Hinchey in view of Mallory do not disclose the “nut and bolts” of the invention, it is implicit that signals are needed to indicate that a packet translation is required and how the translation is to be performed.

18. Regarding claim 8, referring to claim 5, Hinchey in view of Mallory implicitly discloses that an asserted fourth signal to the third logic block enables the recalculation of the FCS. Although Hinchey in view of Mallory do not disclose the “nut and bolts” of the invention, it is implicit that a signal is needed to indicate that new FCS should be calculated.

19. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hinchey et al (USPN 5,999,541) in view of Mallory (USPN 6,335,933) as applied to claim 1 above, and further in view of Callon et al (USPN 5,251,205).

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20. Regarding claim 2, referring to claim 1, Hinchey in view of Mallory does not disclose that the stripping step (b) further comprises: (b1) placing information in the LARQ header in a frame status frame which will follow the stripped frame. Rather Hinchey in view of Mallory discloses placing the stripped information within a designated portion of the frame (Hinchey: col. 4, lines 5-34). Callon teaches, in a packet transmission system supporting multiple protocols, that packets are fragmented if the maximum transmission unit of a link is smaller than the packet (col. 48, lines 30-43). It would have been obvious to one of ordinary skill in the art at the time of the invention to place the stripped information in a subsequent frame (as broadly defined, a "frame status frame") in order to ensure that the length of the stripped frame is within the transmission size of the stripped frame's network without losing the information contained in the stripped portion of the frame.

21. Claims 4 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinchey et al (USPN 5,999,541) in view of Mallory (USPN 6,335,933) in further view of Gibson et al (WO 96/13106).

22. Regarding claim 4, referring to claim 3, Hinchey in view of Mallory does not expressly disclose (f) determining if a bit pattern at a set byte location in the stripped frame matches a wake pattern. Gibson teaches, in an Ethernet network, determining if a bit pattern at a set byte location in the stripped frame matches a wake pattern in order to remotely wake up a computer which is in sleep mode to save energy (page 6, lines 15-22; page 7, lines 14-19; and page 9, line 21-page 12, line 10). It would have been obvious to one of ordinary skill in the art at the time of the invention to determine if a bit pattern at a set byte location in the stripped frame matches a wake pattern in order to remotely wake up a computer which is in sleep mode to save energy.

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23. Regarding claim 9, Hinchey discloses a controller comprising: a first logic block for detecting a field in a frame (col. 1, line 66-col. 2, line 21), a second logic block for stripping the field and a FCS in the frame (col. 1, line 66-col. 2, line 21; col. 5, lines 1-3; and col. 5, lines 4-28), and a third logic block for recalculating the FCS for the stripped frame and for adding the recalculated FCS to the stripped frame (col. 1, line 66-col. 2, line 21; col. 5, lines 1-3; and col. 5, lines 4-28). Hinchey does not disclose that the field is a limited automatic repeat request (LARQ) header. Mallory teaches, in a home phone Ethernet network, modifying an Ethernet frame to include an LARQ header in order to reduce the effective error rate of an unreliable frame-based communication channel or network (col. 4, lines 16-38 and col. 6, lines 9-20). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to have the field be an LARQ header in order to convert an Ethernet frame into an LARQ Ethernet frame and vice versa such that the frame can be transmitted in a home phone network. Hinchey in view of Mallory does not expressly disclose that the system comprises an Ethernet controller in a sleep mode. Gibson teaches, in an Ethernet network, having Ethernet devices enter sleep mode in order to conserve power (page 6, lines 15-22; page 7, lines 14-19; and page 9, line 21-page 12, line 10). It would have been obvious to one of ordinary skill in the art at the time of the invention to have an Ethernet controller in a sleep mode such that the Ethernet controller conserves power.

24. Regarding claim 10, referring to claim 9, Hinchey in view of Mallory in further view of Gibson implicitly discloses that an asserted first signal to the first logic block indicates that the LARQ header is enabled and must be stripped from the frame. Although Hinchey in view of Mallory do not disclose the “nut and bolts” of the invention, it is implicit that a signal is needed to indicate that a packet translation is required.

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25. Regarding claim 11, referring to claim 9, Hinchey in view of Mallory in further view of Gibson implicitly discloses that the first logic block asserts a second signal and a third signal to the second logic block, wherein the second signal indicates that the FCS is to be stripped from the frame, wherein the third signal indicates that the LARQ header is to be stripped from the frame. Although Hinchey in view of Mallory do not disclose the “nut and bolts” of the invention, it is implicit that signals are needed to indicate that a packet translation is required and how the translation is to be performed.

26. Regarding claim 12, referring to claim 9, Hinchey in view of Mallory in further view of Gibson implicitly discloses that an asserted fourth signal to the third logic block enables the recalculation of the FCS. Although Hinchey in view of Mallory do not disclose the “nut and bolts” of the invention, it is implicit that a signal is needed to indicate that new FCS should be calculated.

Conclusion

27. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (703)305-6970. The examiner can normally be reached on Mon.-Fri. 7:00-5:00 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703)308-6602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel J. Ryman
Examiner
Art Unit 2665


Daniel J. Ryman


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